

BIOSENSOR AND USE THEREOF TO IDENTIFY THERAPEUTIC DRUG  
MOLECULES AND MOLECULES BINDING ORPHAN RECEPTORS

ABSTRACT OF THE INVENTION DISCLOSURE

G protein biosensors comprising mammalian G protein subunits fused to fluorescent proteins emitting a FRET signal expressed in living intact functional cells. The intensity of the FRET signal is strongly responsive to the activation state of the biosensors. The biosensors respond reproducibly to agonist and antagonist drug molecules specific for G protein coupled receptors. The biosensors have utility in identifying and classifying candidate therapeutic drugs as to their therapeutic value.